amyloidoma in 7 patients. AutoSCT was performed in 126 patients (PA=79 and AM=47).

Results: The day 100 NRM was 5% and 1-year NRM was 8%. With a follow up of 14 years in surviving patients, the 10-year overall survival (OS) of AL patients was significantly better in those undergoing AutoSCT (41% vs. 17%; p<0.0001; Figure 1). Involvement of more than one organ (6-yr OS 36% vs. 55%; p=0.04) and cardiac involvement (2-yr OS of 57% vs. 78%; p=0.01) were associated with poor outcome. In the patients undergoing AutoSCT: PA vs. AM, Mayo staging, Boston University (BU) staging or bone marrow plasma cells >10 % at the time of autoSCT did not have an impact on OS. Cardiac biomarkers including NT-ProBNP and Troponin-I and T levels were available in a limited number of patients and were not analyzed for survival outcomes. In multivariate analysis, superior OS was associated with: age <60yrs (HR 2.1, p=0.022); and induction treatment before AutoSCT (HR 2.7, p=0.02). Involvement of kidney as the only end organ showed a trend toward improved survival (HR 1.6, p=0.06). Specifically for PA patients (n=79); treatment before autoSCT was associated with improved 3-yr OS: 85% vs. 66%; p=0.02.

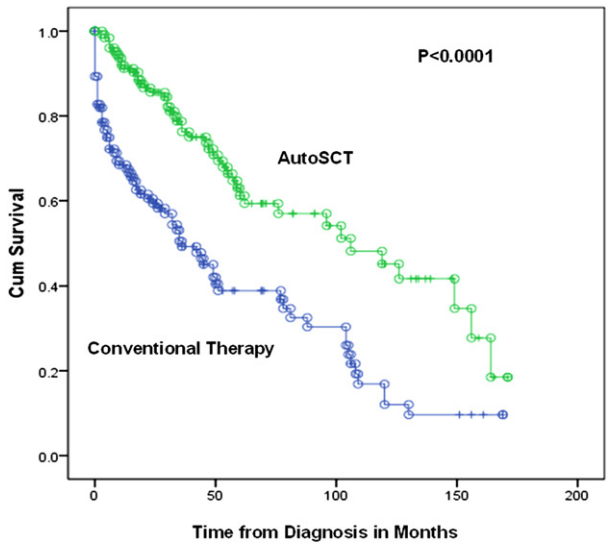

Figure 1. OS: AutoSCt vs. Conventional Therapy in AL Amyloidosis patients.

Conclusions: AL patients should be evaluated for AutoSCT and selected patients should undergo induction therapy to decrease amyloid burden prior to AutoSCT.

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Are Outcomes After Myeloablative Conditioning Regimen in Double Cord Blood Transplantation (UCBT) Better Than Single UCBT for Adults with Acute Leukemia in Remission?

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Allogeneic hematopoietic stem cell transplantation (HSCT) is indicated for patients (pts) with acute leukemia (AL). For adults requiring HSCT urgently, such as pts in first complete remission (CR1), UCBT is a valid stem cells source. With the aim to compare single vs double UCBT after MAC we analyzed 239 adults with AL in CR1. Pts were transplanted with sUCBT (n=156) or dUCBT (n=83) from 2005-2011 in EBMT centers for ALL (n=101) and AML (n=138). Type of MAC was statistically associated with outcomes therefore pts were analyzed in 3 different groups: Group 1: pts receiving sUCBT with TBI-based+Cy (+Flu) (n=68) (performed in 42 transplant centers (TC)), Group 2: pts receiving sUCBT with Bu+Flu+Thiotepa (n=88) (performed in 23 TC) and Group 3: pts receiving dUCBT with Cy+TBI+Flu (n=83) (performed in 47 TC). Median follow-up: 24 months. No statistical differences were found among the 3 groups for pts and disease characteristics however pts in group2 were older than in group1 and 3 (p=0.03).

Median infused TNC was $2.9x10^7$/kg for group1, $3x10^7$/kg for group2, and $3.7x10^7$/kg for group3 (p=0.01). ATG was part of conditioning regimen in 73% of pts. The use of ATG was different in the 3 groups (70%, 90% and 40% for group1, 2 and 3, respectively p<0.001).

For group1, group2 and group3, cumulative incidence (CI) of 60 days neutrophil recovery was 82%, 89% and 87% (p=0.15), with median time of 27, 21 and 24 days, respectively (p<0.001).

CI of acute GVHD (grade II-IV) was 30% vs 20% vs 45% for group1, group2 and group3, respectively (p=0.001). CI of chronic GvHD at 1 year was 29%, no differences in CI among the groups.

At 1 year, CI of TRM was 44% for group1, 33% for group2 and 36% for group3 (p=0.46). In multivariate analysis, two factors were associated with higher TRM: diagnosis of ALL (p=0.048) and age>35 years (p=0.049). One-Hundred-six pts died and causes of death were infection (n=38), GvHD (n=18), other transplant-related-events (n=31) or relapse (n=18).

CI of 2y relapse was 25% for group1, 18% for group2 and 16% for group3 (p=0.22). No factors were found associated with increase relapse incidence in multivariate analysis. The 2y probability of leukemia-free-survival (LFS) was 31% for group1 (sUCBT-TBI based), 48% for group2 (sUCBT-BuFluTT), and 47% for group3 (dUCBT) (p=0.03). No center effect was found. In multivariate analysis, use of sUCBT using TBI based MAC (HR=0.9, p=0.003), diagnosis of ALL (HR=0.69, p=0.04) and age>35years (HR=1.4, p=0.04) were independently associated with decreased LFS.

In this registry based analysis, in the myeloablative setting for adults with AL in CR1, outcomes (TRM, RI and LFS) after dUCBT were not statistically different from sUCBT using iv-BuFluTT. However, compared to sUCBT using TBI-based MAC, dUCBT was associated with lower RI and better LFS rates.

In the MAC setting, the combination of conditioning regimens and type of graft (single vs. double) may have different impact UCBT outcomes.